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Journal of Clinical Images

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A Dramatic Case of Pathological Skin Picking in a Smoked Heroin Dependent Woman

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Received: Dec 09, 2021
Accepted: Jan 05, 2022
Published Online: Jan 10, 2022
Journal: Journal of Clinical Images
Publisher: MedDocs Publishers LLC
Online edition: http://meddocsonline.org/

Keywords: Pathological skin picking; Drug abuse; Dermatitis artefacta; Selective serotonin reuptake inhibitor; Obsessive-compulsive behavior.

Cite this article: Alonso SA, Vela CG, Torre DF, Meriel CA, Fernández MM, et al. A Dramatic Case of Pathological Skin Picking in a Smoked Heroin Dependent Woman. J Clin Images. 2021; 4(2): 1109.

Introduction

Pathological Skin Picking (PSP) is a disabling disorder characterized by dysfunctional, repetitive, and compulsive picking of the skin that causes physical injury [1]. The medical sequelae of this type of body-focused repetitive behavior can include lesions, localized infections, septicemia, scarring, tissue damage requiring plastic surgery and even potentially life-threatening outcomes [2-4]. Moreover, significant functional, social, and emotional impairment frequently accompany this disease [1,5-8].

Often unrecognized by clinician, community prevalence studies suggest that skin picking disorder appears to be as common as many other psychiatric disorders, with estimated prevalence of 2% in dermatology patients and approximately 4-5% in the general population, and it is more common in females [1,4-9]. However, because PSP patient feels often embarrassed and ashamed, less than 20% of skin pickers seek medical help [1,4-6]. The course of the disease is usually chronic and often coexist with one or more comorbid psychiatric conditions, such us Obsessive Compulsive Disorder (OCD), depression, anxiety, substance abuse, body dysmorphic disorder, obsessive compulsive personality disorder, or borderline personality disorder [3,4,9].

In general, limited knowledge exists regarding the underlying physiological and neuronal etiology of this illness. But since PSP is considered an OCD-related syndrome, shared neurobiological features are to be expected [2,4]. In fat, the "uncontrollable" nature of the picking behavior, including the failure to stop despite the knowledge of the consequences and the special pleasure while engaging in the activity, is clinically similar to the behaviors noted in substance abused. Cognitive and behavioral inflexibility are at the core of compulsivity in OCDs and addictions. The reviewed data suggest that this compulsivity is related to dysregulation of the frontostriatal network and to impaired reward-punishment limbic processing, although other areas such as cerebellum might be also involved. This is in turn related with attenuated dopamine and γ-aminobutyric acid release in the ventral striatum, and with diminished serotonergic prefrontal control [2,4,9,10].

The paucity of available data on PSP treatment makes a challenge for clinicians. Treatments have largely focused on pharmacological and behavioral interventions. However, in the last two decades or so, a handful of clinical trials have shown positive results in the treatment of PSP and other OCDs using serotonergic medications [1,4-6,9,10]. Indeed, the pharmacological first-line treatment of choice for OCDs is a selective serotonin reuptake inhibitor (SSRI), even though the data on SSRI efficacy in PSP is somehow controversial, with many cases of treatment failure or incomplete resolution, suggesting different subtypes of skin pickers [4,7,9]. Case reports or case series have also shown effectiveness of inositol, N-acetylcysteine, olanzapine, pimozide, clomipramine, fluvoxamine, fluoxetine and doxepin for the treatment of PSP [1,3,6]. Non-pharmacologic treatments (cognitive-behavioral therapy, habit-reversal therapy, Internet-based treatments, and acceptance-enhanced behavior therapy) have also shown promising results [1,3-7]. However, there is still a conspicuous absence of evidence-based treatments options [1].

Clinical image description

We reported here the case of a 48-year-old Caucasian female showing Pathological Skin Picking (PSP) disorder along with a history of heroin abuse. The patient was brought by her son to the Emergency Department of our hospital for evaluation of a 9x7 cm parietal wound, with purulent exudate and bad odor, that extended through all dermal layer of her scalp, reaching exposure of the cranium (Figure 1, panels A and B). There was no history of trauma, head injury nor any indication suggestive of hypoxia or anoxia. She was afebrile. The initial impression was Dermatitis Artefacta (DA) of the scalp.

Heroin is usually smoked, snorted or injected. The patient denied initially injecting heroin, but later she confessed smoking it. Toxicology tests were not performed in view of the admitted history of preceding drug use. Routine blood investigation results were normal, but Human Immunodeficiency Virus test was positive. A computerized tomography scan of the head showed chronic osteomyelitis localized in the frontal bone (Figure 2). A biopsy sample of the lesion was taken and no accumulation of lymphocytes or signs of vasculitis and thrombosis were found (Figure 3). Skin tissue culture detected presence of Staphylococcus aureus. Other tests, such as magnetic resonance of the brain, renal ultrasonography and chest X-ray, did not yield any significant results. Upon obtaining further history details, the patient admitted constant and obsessive picking on her parietal bone, at least during the last 8 months.

After psychiatric evaluation, she was started on citalopram (a SSRI) 20 mg/day and titrated up to 40 mg/day by the fourth week. Completing a course of broad-spectrum antibiotic therapy, the patient´s condition stabilized. Plastic surgery unit declined to perform a skin graft. Three weeks after stopping heroin abuse, she showed clinical improvement with partial regression of the bandage wound. However, the patient was admitted latter on into the psychiatry department under personality disorder diagnosis.

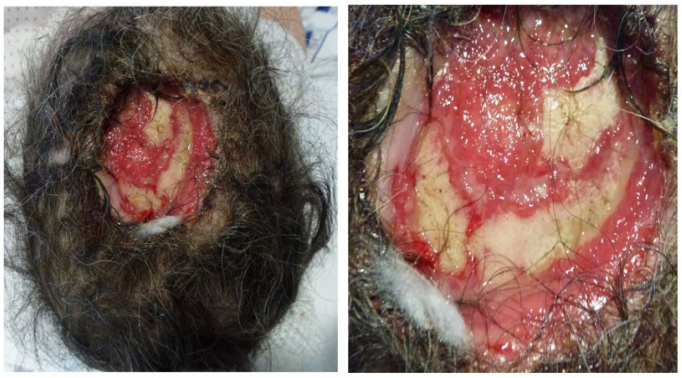

Figure 1: Transthoracic echocardiography of the patient during the first examination after the COVID- 19 pneumonia showing GLS of - 16.7%.

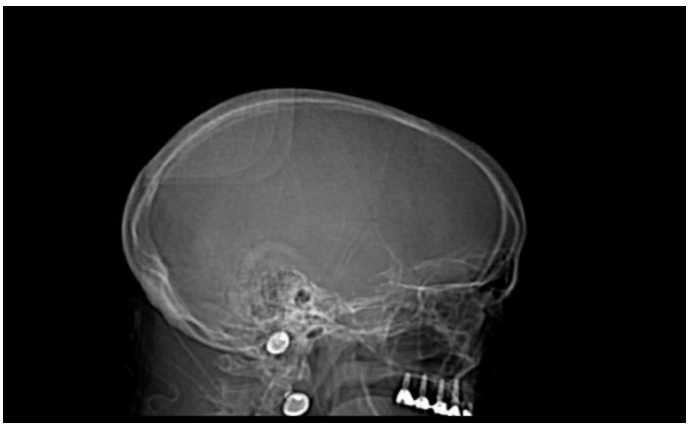

Figure 2: Computerized tomography scan without contrast of the patient´s head. Exploration suggested chronic osteomyelitis localized in the frontal bone without affecting the diploe bone.

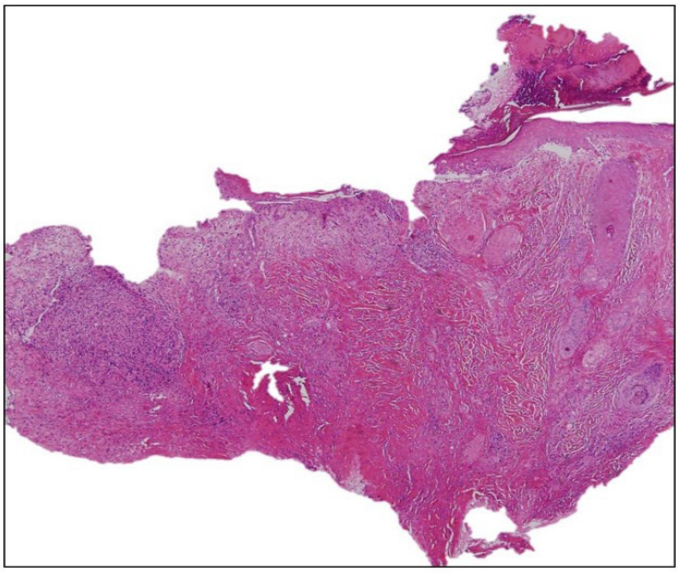

Figure 3: Micrograph of Haemotoxylin and Eosin staining of a histological sample of patient´s skin. The biopsy showed a deep ulcer with a mixed inflammatory cell infiltrate with granulation tissue. There was no vasculitis or thrombosis. X40.

Discussion

PSP can entail a diagnostic conundrum to healthcare professionals since it can present as an independent syndrome, or it can be a symptom of several different psychiatric disorders [7]. PSP usually begins with a dermatologic condition and patients are often referred to clinicians other than psychiatrists such as dermatologists or surgeons [5]. Patients find psychiatric referral incomprehensible because they believe they have a dermatological condition and do not understand why the dermatologist does not want to cure the lesions. Therefore, clinical evaluation of patients with skin picking disorder entails a broad physical and psychiatric examination, encouraging an interdisciplinary approach to diagnose [3].

One of the first symptoms that the clinician might point out as indicative of hidden PSP is the presence of Dermatitis Artefacta (DA). DA is defined as the deliberate production of self-inflicted skin lesion to satisfy an unconscious psychological or emotional need. The term is generally used to refer to skin lesions that appear without apparent cause while the patient denies all responsibility for their production. This condition is a rarely diagnosed and often poses a challenge for the dermatologist because of the great variety of possible dermatologic conditions involved [11]. However, experts concur that DA is a cutaneous manifestation of a psychiatric disorder [11,12].

PSP is now considered related to OCDs [12], however one difficulty in the diagnostic and treatment of the disease is that PSP may be fairly heterogeneous [4]. Moreover, PSP shares several clinical similarities with substance use disorders including the failure to stop the behavior despite knowledge of the consequences and the associated pleasurable while engaging in the activity. In this sense, individuals who abuse cocaine or methamphetamine often report uncontrollable picking at their skin to the point of causing noticeable tissue damage [4]. A study of 92 individuals with skin picking disorder found that 17.4% used illegal drugs, 22.8% used tobacco products, and 25.0% used alcohol to relieve feelings associated with picking [13].

To the best of our knowledge, this is the first report of smoked heroin induced ulcer caused for compulsive scratching. We can hypothesize that smoking heroin probably involves a reduced risk of obtaining high blood concentrations of morphine inducing pruritus, which promotes compulsive skin piking. In fact, a common dermatologic complaint among heroin users is an intense pruritus, due to mast cell degranulation and histamine release, that occurs immediately following injection with duration lasting up to several days [14]. Drug abuse and addictive behavior that produces cutaneous manifestations are commonly encountered issues in clinical dermatology practice. Dermatologists should be able to recognize these manifestations, as they provide clinical clues that are relevant to the diagnosis and treatment of the patient.

Conclusion

PSP is a prevalent disorder that can have potentially serious health consequences. Besides potential disfigurement and scarring, PSP can have significant morbidity and mortality. Early diagnosis and appropriate treatment by clinician are essential to prevent potentially fatal consequences [1,5]. Our case highlights the need for awareness of PSP when evaluating skin lesions, including DA for any differential diagnosis. It is imperative that the primary care physician, psychiatrist, dermatologist, or emergency room physician thoroughly investigate the source of all superficial skin ulcerations. A thorough medical and psychiatric anamnesis should be obtained.

Declaration

Acknowledgements: The authors have received writing and editorial support from José L. Ramírez, PhD, in the preparation of this manuscript.

Conflict of interest: All authors have no conflicts of interest to declare with respect to the research, authorship, and/or publication of this article.

Patients consent: Pictures and clinical data are published with patient's informed consent.

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